

ELECTRONIC TUBE REFERENCE

4DK6

Voltage - Pentode Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

PENTODE

Sharp-cutoff pentode designed for television IF, picture-IF, video, or VHF tuner amplifier service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	7
NOMINAL HEATER	4.2 V / 450 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	350000 Ω
TRANSCONDUCTANCE	0.0098 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	1.7 W
MAXIMUM SCREEN DISSIPATION	0.55 W
Reference/equivalence-only source: ratings/characteristics for this section are not reproduced; missing promoted values intentionally not inferred from the external 6DK6 datasheet.	

Sharp-cutoff miniature pentode used as an IF amplifier in color and black-and-white television receivers.



SOURCE OPERATING CONDITIONS

1965 Sylvania Electronic Tubes Vol3

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	125 V	—
Screen-grid voltage	125 V	—
Cathode bias resistor	56 Ohm	—
Plate current	12 mA	—
Screen-grid current	3.8 mA	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	350000 Ohm	—
Transconductance	9800 uS	—
Control-grid cutoff voltage	-6.5 V	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.025 pF	Unshielded



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1965 Westinghouse Data Book

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1965 WESTINGHOUSE DATA BOOK

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	4.2 V	—
Heater Current	450 mA	—
Plate Resistance	350000 ohm	RepresentativePublishedPoint

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	330 V	—
Maximum Plate Dissipation	2.3 W	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1966 Tung Sol Electronic Tubes 1 of 4

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 1 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance maximum	0.025 pF	Section1
Input capacitance	6.3 pF	Section1
Output capacitance	7.9 pF	Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater warm-up time	11 s	Section1
Transconductance	9800 μ S	Section1
Plate resistance	0.35 M Ω	Section1
Control-grid voltage at 20 μ A plate current	-6.5 V	Section1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	125 V	IFAmplifier
Screen voltage	125 V	IFAmplifier
Cathode-bias resistor	56 Ω	IFAmplifier
Plate current	12 mA	IFAmplifier
Screen current	3.8 mA	IFAmplifier


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1968 General Electric Co

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1968 GENERAL ELECTRIC CO

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	4.2 V	—
Heater Current	450 mA	—


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 RCA HB3 Binder 4 of 7

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1971 RCA HB3 BINDER 4 OF 7

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Current	420 mA–480 mA	Published nominal $\pm$ tolerance
Heater Voltage	4.2 V	At heater current 0.45 A
Warm-Up Time	11 s	Average

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	330 V	Inherited from explicitly referenced 6-volt parent type; heater variant
Screen Supply Voltage	330 V	Inherited from explicitly referenced 6-volt parent type; heater variant
Plate Dissipation	2.3 W	Inherited from explicitly referenced 6-volt parent type; heater variant

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	9800 μ S	Inherited from explicitly referenced 6-volt parent type; heater variant



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

1975 RCA RC30

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1975 RCA RC30

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	15 mA	Published in approved 12DK6 target entry; Section1
Equivalent Noise Resistance	300 Ω	Published in approved 12DK6 target entry; Section1
Grid-Circuit Resistance	1 M Ω	Published in approved 12DK6 target entry; Section1
Heater to Cathode Circuit Resistance	0.02 M Ω	Published in approved 12DK6 target entry; Section1
Heater Voltage (ac/dc) 3.16 4.2 6.3	12.6 V	Published in approved 12DK6 target entry; Section1
Heater Current 0.6 0.45 0.3	150 mA	Published in approved 12DK6 target entry; Section1
Plate Voltage	330 V	Published in approved 12DK6 target entry; Section1
Grid-No.3 (Suppressor-Grid) Voltage, Positive value	0 V	Published in approved 12DK6 target entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.2 (Screen-Grid) Supply Voltage	330 V	Published in approved 12DK6 target entry; Section1
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0 V	Published in approved 12DK6 target entry; Section1
Plate Dissipation	2.3 W	Published in approved 12DK6 target entry; Section1
For grid-No.2 voltages up to	165 V	Published in approved 12DK6 target entry; Section1
For grid-No.2 voltages up to 165 volts	0.55 W	Published in approved 12DK6 target entry; Section1
For grid-No.2 voltages between 165 and	330 V	Published in approved 12DK6 target entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Internal Shield	6.3 pF	Published in approved 12DK6 target entry; Section1
Internal Shield	1.9 pF	Published in approved 12DK6 target entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.1 Voltage (Approx.) for plate current of 20 mA	-6.5 V	Published in approved 12DK6 target entry; Section1

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes,
and their source documents.

[Catalog](#) [Tube types](#) [Full books](#) [Blog](#) [Feedback & corrections](#)

© 2026 Tube Tinker